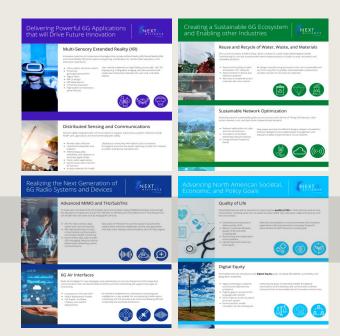# NEXT G ALLIANCE
An ATIS Initiative
Overview

David Young, ATIS VP of Technology & Solutions and
Managing Director of the Next G Alliance

February 2, 2024

NGA's Journey to 6G

https://www.nextgalliance.org/research-priorities/

Develop North American 6G Vision

6G Library – Next G Alliance

Align on a collective set of 6G Research Priorities

Create 6G Public-Private Partnership for Next Frontier of Innovation and Investment

Foundational Goals

Next G Alliance Agenda

Private sector, academia and government collaborate to position North America as a global leader for Next G technologies.

North American Model for Success

A comprehensive model built on North American 6G technology developments, R&D needs, standards goals and market readiness.

6G Market Leadership

Strategies that will lead to rapid commercialization and adoption of Next G technologies across domestic and global markets.

Foundations for
Next G Alliance 6G Vision

North American 6G Roadmap defines the path for connecting every stage of the lifecycle and progressing to an end-of-decade 6G vision
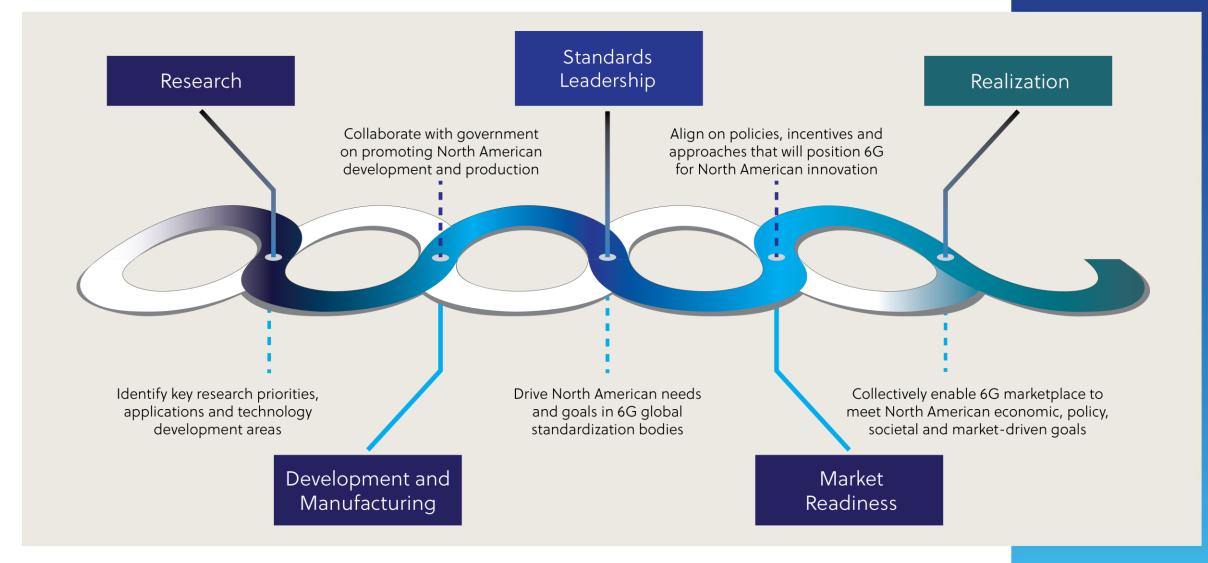
6G Leadership Priorities incorporate innovative applications, societal needs, economic goals, government actions, and technology developments

Audacious Goals create the framework for advancing North American leadership and positioning a robust 6G marketplace
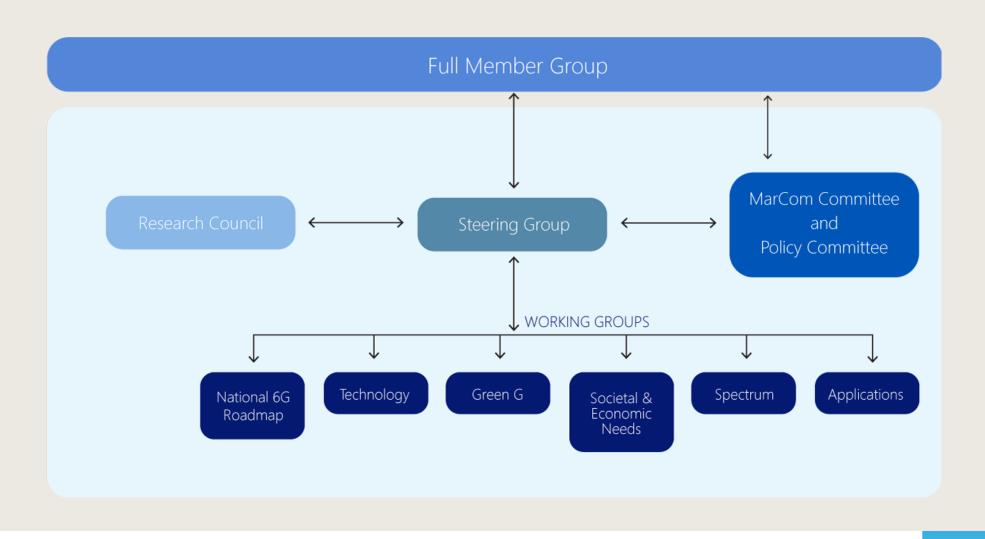
Next G Alliance Lifecycle to 6G

Research
Identify key research priorities, applications and technology development areas

Collaborate with government on promoting North American development and production

Development and Manufacturing

Standards Leadership
Drive North American needs and goals in 6G global standardization bodies

Align on policies, incentives and approaches that will position 6G for North American innovation

Market Readiness

Realization
Collectively enable 6G marketplace to meet North American economic, policy, societal and market-driven goals

Next G Alliance Structure

Research Council

> Identify NGA's research priorities for engagement with government and academic research communities

> Support the NGA in prioritizing research objectives that will advance the development of a comprehensive North American 6G research strategy

> Inform NGA about existing sources of research funding, including those from industry and government

> Provide technical leadership and support for future NGA workshops focused on exploring 6G Research Topics
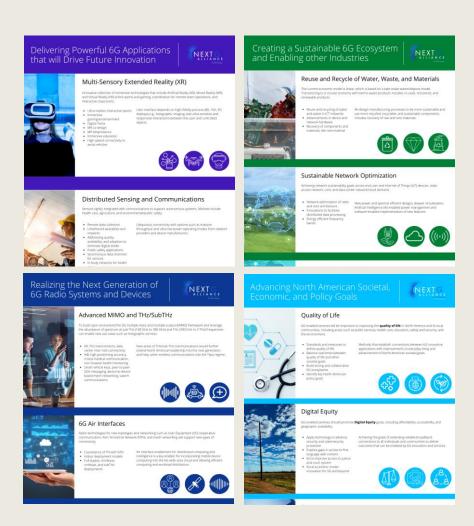
Research Priorities

> The Next G Alliance's research priorities are a collective compass for North America's 6G innovation platforms as well as the region's technology landscape.

https://www.nextgalliance.org/research-priorities/

Top Ten Research Areas

Security, Trust and Resilience

Radio Access Technologies

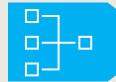New Radio Components and Antennas

Joint Communications and Sensing

Network Convergence and Integration

Architecture and Control of Open, Disaggregated Systems

AI/ML

Sustainability/Reduced Energy Consumption and Cost

Spectrum Sharing and Enhanced Spectrum Access

Cloud Native Networks and Distributed Cloud

Applications That Affect All Aspects of Life, Society, and Industries

Everyday Living

Service robots for home assistance

Indoor/outdoor delivery services

Intelligent travel assistance

Experience

Real-time interactive gaming

MR entertainment

MR-powered classrooms

XR-enriched transportation

Critical Roles

Digital twins

Robotics for hazardous conditions

Remote surgery, therapy & monitoring

Manufacturing & agriculture

Societal Goals

Digital equity

Cultural and civic participation

Public safety

Sustainable society

North America's Six Audacious Goals
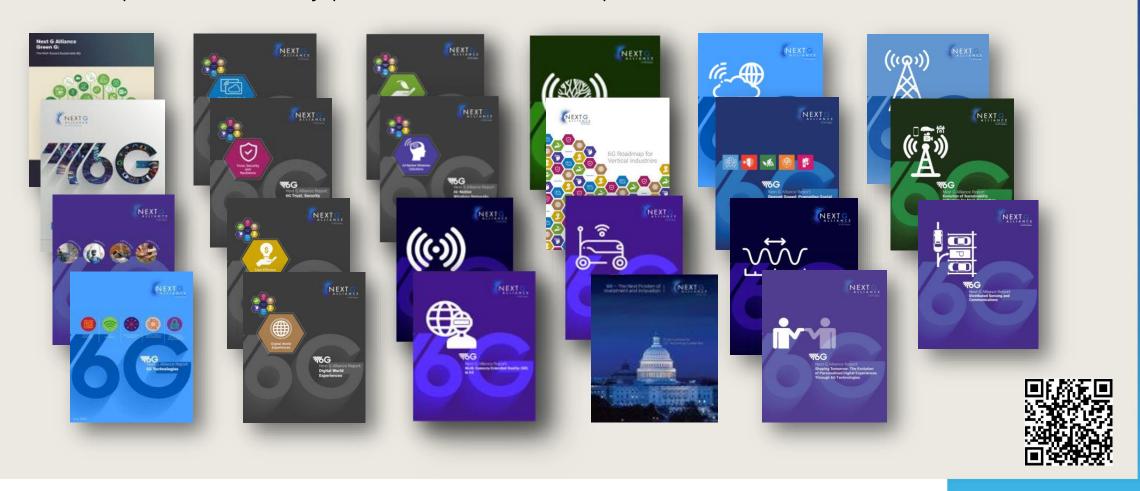
> Top priorities for North America's contribution and Next G leadership

> Identified by Next G Alliance membership
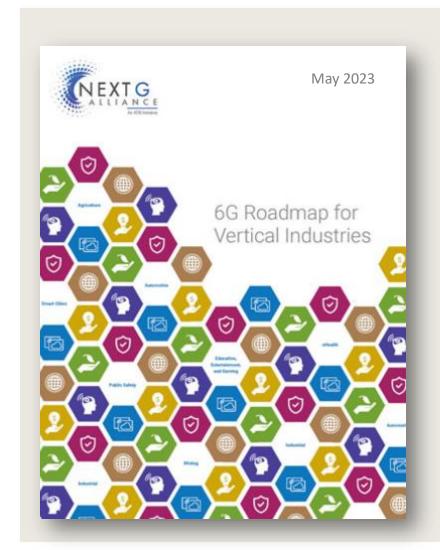
> Address multiple stakeholder interests

Trust, Security, and Resilience

Digital World Experiences

Sustainability

Audacious Goals

AI-Native Wireless Solutions

Distributed Cloud and Communications Systems

Cost-Efficient Solutions

NEXT G ALLIANCE
An ATIS Initiative

NGA Reports

NGA's comprehensive library provides future 6G compass for North America

6G Roadmap for Vertical Industries

May 2023

6G Roadmap for Vertical Industries

Agriculture

Automotive

Education, Gaming and Entertainment

eHealth

Industrial

Mining

Public Safety

Smart Cities
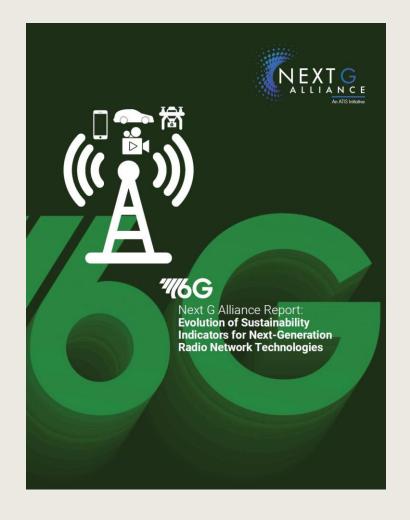
- ✓ Translate North American needs into technology outcomes
- ✓ Target shared investments in 6G PoCs and testbeds
- ✓ Connect North American 6G needs with the marketplace

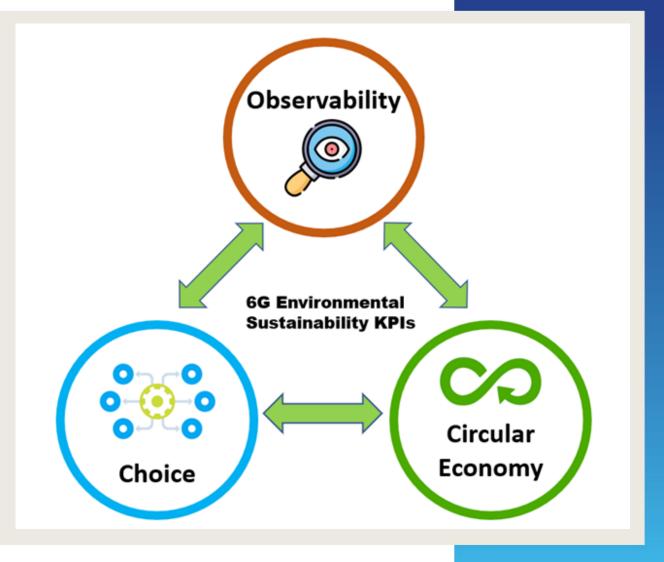# Evolution of Sustainability Indicators for Next-Generation Radio Network Technologies

> Discusses current and future environmental sustainability KPIs, as well as technological enablers critical for the transition from Sustainability-Aware to Sustainability-Native next-generation wireless technologies.

> Introduces three crucial dimensions — Observability, Choice, and Circular Economy — that provide an enhanced approach for implementing KPIs

6G

Next G Alliance Report:
Evolution of Sustainability Indicators for Next-Generation Radio Network Technologies
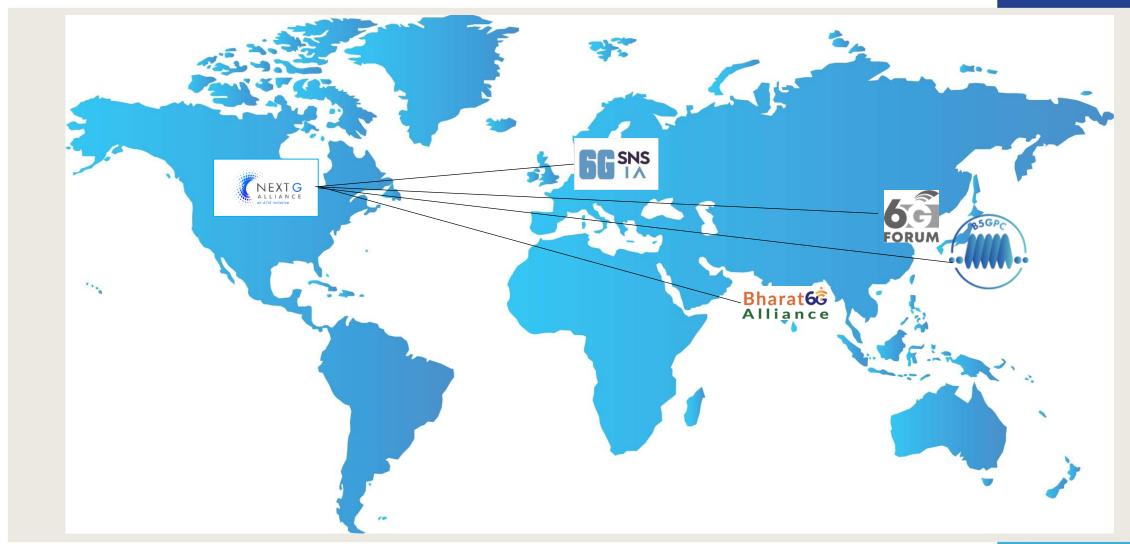
Paradigms for Sustainability Native 6G

> **Observability:** Track and report environmental indicators

> **Choice:** Empower carriers and users to exercise preferences in selecting sustainable 6G services

> **Circular Economy:** Renewable products, reuse of resources and recovery of materials and components

Global Collaboration

Collaboration is the Key to Success

NGA is progressing an action-oriented agenda:

> Foundational documents lead to recommended priorities and actions

> Prioritization of 6G research aligned with NGA vision and North American needs

> Increasing the velocity of 6G research and collaboration across the ecosystem

> A holistic approach that leverages research outcomes to promote new opportunities (e.g., jobs of the future, education, innovation, and future societal needs).

North American 6G leadership requires collaboration across industry, academia, and Government